

10/512140

Rec'd PCT/PTO 22 OCT 2004

## PATENT COOPERATION TREATY

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## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

|   |  |  |
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| Applicant's or agent's file reference<br>TS7607 PCT   | <b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416) |  |
| International application No.<br>PCT/EP 03/04359  | International filing date (day/month/year)<br>24.04.2003   | Priority date (day/month/year)<br>25.04.2002 |
| International Patent Classification (IPC) or both national classification and IPC<br>C10L1/08 |  |  |
| Applicant<br>SHELL INTERNATIONALE RESEARCH MAATSCHAPPIJ B.V.                                  |  |  |

- This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 5 sheets, including this cover sheet.
 

☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of      sheets.



EPO - DG 1

13. 08. 2004

- This report contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

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|---|--|
| Date of submission of the demand<br><br>21.11.2003  | Date of completion of this report<br><br>12.07.2004  |
| Name and mailing address of the international preliminary examining authority:<br><br> European Patent Office<br>D-80298 Munich<br>Tel. +49 89 2399 - 0 Tx: 523656 epmu d<br>Fax: +49 89 2399 - 4465 | Authorized Officer<br><br>Keipert, O<br><br>Telephone No. +49 89 2399-7375  |

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. **PCT/EP 03/04359**

**I. Basis of the report**

1. With regard to the elements of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17):*

**Description, Pages**

1-28 as originally filed

**Claims, Numbers**

1-10 as originally filed

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).  
☐ the language of publication of the international application (under Rule 48.3(b)).  
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority in written form.  
☐ furnished subsequently to this Authority in computer readable form.  
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.  
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:  
☐ the claims, Nos.:  
☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

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International application No. **PCT/EP 03/04359**

**III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability**

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application,

☒ claims Nos. 7

because:

☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (specify):

☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):

☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

☒ no international search report has been established for the said claims Nos. 7

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

☐ the written form has not been furnished or does not comply with the Standard.

☐ the computer readable form has not been furnished or does not comply with the Standard.

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

|                               |             |           |
|-------------------------------|-------------|-----------|
| Novelty (N)                   | Yes: Claims | 1-3, 5, 6 |
|                               | No: Claims  | 4, 8-10   |
| Inventive step (IS)           | Yes: Claims | 1-3, 5, 6 |
|                               | No: Claims  | 4, 8-10   |
| Industrial applicability (IA) | Yes: Claims | 1-6, 8-10 |
|                               | No: Claims  |           |

2. Citations and explanations

see separate sheet

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/EP 03/04359

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. The following documents are referred to in this communication; the numbering will be adhered to in the rest of the procedure:

D1: US-A-5814109  
D2: WO-A-0149812  
D3: US-B1-6369286  
D4: DE-C-683927

2. Claims 4, 8 are not clear (Article 6 PCT). In claim 4, the formulation "for the purpose of reducing subsequent combustion related deposits..." attempts to define a method of operating a diesel engine or diesel-powered vehicle in terms of a result to be achieved, which only amounts to claiming the underlying technical problem. In claim 8, the formulation "when used as [...], leads to removal..." also attempts to define a diesel fuel in terms of a result to be achieved, rather than by its structural technical features. For the purpose of substantive examination, these formulations have been interpreted as not limiting the scope of the claims.
3. The application does not meet the requirements of Article 33 PCT, because the subject-matter of claims 4, 8-10 is not new in the sense of Article 33(2) PCT. Claim 8 relates to a diesel fuel in general, which is not novel *prima facie*. Claim 9 relates to a diesel fuel comprising at least 30 wt% of a Fischer-Tropsch derived gas oil. Documents D1-D3 (see passages cited in the search report) are prejudicial to the novelty of claim 9. Furthermore, claim 10 is not novel in view of the disclosure of D3. Finally, since an engine is generally operated by introducing a fuel, claim 4 is not novel either.
4. The subject-matter of independent claims 1, 5 relates to the use of a Fischer-Tropsch derived gas oil in a diesel fuel composition for a particular purpose. For the purpose of assessing novelty and inventive step, the technical effect of reducing and/or removing subsequent combustion related deposits (keep-clean and/or clean-up effect) in a diesel engine is construed as constituting a technical feature.
5. The means of realising the claimed effect (i.e., introducing the fuel composition

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International application No. PCT/EP 03/04359

into a diesel engine) are identical to those disclosed in the prior art and commonly known to the skilled person. The claimed effect must therefore have been inherently present. However, none of the documents D1-D4 discloses the claimed clean-up and/or keep-clean effect. It is therefore considered that these effects remain hidden in the prior art, and the claimed effects are considered not to form part of the state of the art in the sense of Article 33(2) PCT. Claims 1, 5 are thus novel.

6. The known effects brought about by a diesel fuel comprising Fischer-Tropsch derived gas oil, as disclosed in the prior art, are the improvement of cetane number, lubricity, energy density, low-temperature properties, and ignitability. In view of the prior art, it is considered that the claimed keep-clean / clean-up effects are non-obvious to the person skilled in the art. Claims 1, 5 are thus considered as involving an inventive step in the sense of Article 33(3) PCT.
7. Claims 2, 3, 6 are dependent on claims 1 or 5 and as such also meet the requirements of the PCT with respect to novelty and inventive step.